DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017306
Date Inspected: 09-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name: See Below

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspectors: ZPMC: Geng Wei; ABF: Mr. Shang Qing Quan

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

At around 0100 hours ZPMC workers used an overhead crane to position OBG segment 13AE floor beam assembly FB3126B in position adjacent to plate SA3016B. This floor beam is designated to be installed at panel point PP119.355. This QA Inspector observed top stiffener plate of SA3016B would not fit in the slot cut into FB3126B and ZPMC used a torch to cut approximately 3mm from the top edge of the slot. ZPMC also used a grinder to remove the flame cut surface prior to inserting the stiffener into the slot. ZPMC then used two jacks and hand operated chain hoists to push floor beam FB3126B into position.

This QA Inspector observed ZPMC welder Mr. Bian Henggui stencil 051359 used shielded metal arc welding procedure specification WPS-B-P-3211-B-U2 to make OBG segment 13AE tack welds between stiffener plate SA3016B and FB3011A. This QA Inspector measured a welding current of approximately 180 amps and Mr. Bian Henggui appeared to be certified to make this weld. ABF CWI Mr. Zheng Qing Quan monitored this welding, the base material was preheated with a torch and the welding electrodes were stored in a portable rod

oven which was warm to the touch. ABF CWI Mr. Zheng Qing Quan informed this QA Inspector that was not able to determine any of the weld numbers and he would continue to attempt to obtain a weld map that shows this information. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Min, stencil 044771 used submerged arc welding procedure WPS-B-T-222 1-B-L2C-S-2 to make OBG segment 13CE butt weld SEG3011-003. This QA Inspector observed ZPMC CWI Mr. Shang Qing Quan has recorded a welding current of 617 amps and 30.5 volts. Ms. Wang Min appeared to be certified to make this weld and the base material had been preheated with electric heating elements. Items observed by this QA Inspector appeared to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Ms. Hue Junrong, stencil 201215 used flux cored welding procedure WPS-B-T-2231-TC-U4b-F to weld lifting attachment plates to OBG segment 13W bottom plates BP3088A and BP3091A. ZPMC attached the overhead crane to these lifting plates and positioned plates BP3091A to BP3091A. ZPMC then used a track mounted acetylene torch to trim the faying surfaces of butt weld SEG3020*-005. This QA Inspector observed Ms. Hue Junrong appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Quin Quan, stencil 044774 used flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair-1 to make repairs to OBG segment 14E stiffener plate weld VP307-001-025 -071 in accordance with weld repair document B-WR15487. The reason for this repair was due to ultrasonic rejections as listed on UT report #B787-UT-16026. This QA Inspector observed a welding current of 296 amps and 30.6 volts and that Mr. Zhang Quin Quan appeared to be certified to make this weld. This QA Inspector observed the base material appeared to have been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Jinjiu stencil 043661 used shielded metal arc procedure WPS-B-P-2214-B-U2-FCM-1 to make OBG segment weld OBE13C-003. This QA Inspector observed Mr. Wang Jinjiu has a welding current of 170 amps and the base materials appeared to have been preheated with a torch prior to commencement of welding. This QA Inspector observed the shielded metal arc welding electrodes were stored in an electrically heated electrode storage container and it appeared to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 15

This QA Inspector observed ZPMC welder Mr. Dan Deyin, stencil 044795 used flux cored welding procedure WPS-B-P-2231-B-U2-F to make tack weld SEG3019-008. This butt weld joins OBG segment 14 bottom plates BP3086A to BP3085A. This QA Inspector observed ABF CWI Mr. Shang Qing Quan had recorded a welding current of 312 amps and 30.0 volts. This QA Inspector observed that Mr. Dan Deyin appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

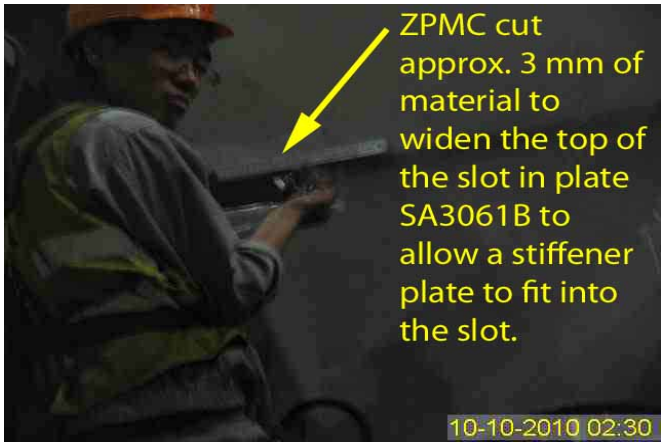
This QA Inspector observed ZPMC welder Mr. Sun Guzuo, stencil 058100 used submerged arc welding procedure WPS-B-T-2221-B-L2C-S-2 to make groove weld SEG3019A-008. These bottom plates will be installed in OBG segment 14E. This QA Inspector observed a welding current of approximately 600 amps and 31.5 volts. This QA Inspector confirmed that Mr. Sun Guzuo appeared to be certified to make this weld and electric heaters had been

used to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yin Xiao Kai, stencil 050232 used shielded metal arc welding procedure WPS-B-P-2211-B-U2-FCM to make tack weld SEG3019-006. This weld joins OBG segment 13 bottom plates BP3083A and BP3084A. This QA Inspector measured a welding current of approximately 175 amps, a torch was used to preheat the base materials prior to welding and Mr. Yin Xiao Kai appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Yard in front of Bay 17

This QA Inspector observed ZPMC welder stencil 054016 used shielded metal arc welding procedure specification WPS-B-P-2213-TC-U4B-FCM-1 to make OBG segment 12AE longitudinal diaphragm weld SEG3001T-034 near panel point PP111. This QA Inspector observed Mr. Wang Li appears to be certified to make this weld and ZPMC QC Inspector Mr. Zhang Lin was monitored this welding. Items observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer